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Signature [Signature]

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ACCOUNT NO. 04-0100

Docket No.:3380/11127-US4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Papsidero *et al.*

Serial No: TBA

Examiner: TBA

Filed: Concurrently Herewith

Group Art Unit: TBA

For: DETECTION AND TREATMENT OF BREAST DISEASE

**SUBMISSION OF SEQUENCE LISTING AND
STATEMENT PURSUANT TO 37 C.F.R. § 1.821**

Hon. Commissioner of Patents
Washington, DC 20231

Sir:

Pursuant to the requirements of 37 C.F.R. §1.821 through §1.825 for
Sequence Listings, a computer readable form (diskette) containing the Sequence
Listing and a paper copy of the Sequence Listing is enclosed herewith.

STATEMENT PURSUANT TO 37 C.F.R. § 1.821

Enclosed herewith is a computer readable form (diskette) containing
sequence disclosure. Pursuant to Rule 37 C.F.R. §1.821, applicants herein state that

Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
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Dated: April 13, 2001

M:3380;II127;NYC0950 WPD

SEQUENCE LISTING

<110> Lawrence, Papsidero
Lyn, Dyster
Jana, Frustaci

<120> Detection and Treatment of Breast Cancer

<130> 3380/11127-US4

<140> TBA

<141> Concurrently Herewith

<150> 09/146,580

<151> 1998-09-03

<150> 60/071,899

<151> 1998-01-20

<150> 60/092,155

<151> 1998-07-09

<160> 35

<170> PatentIn version 3.0

<210> 1

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<213> Homo sapiens

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<222> (70)..(70)

<223> Xaa at position 70 is either Arg or Gly

<220>

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<222> (91)..(91)

<223> Xaa at position 70 is either Lys or Asn

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			20				25						30		

Glu Val Ser His His Ile Ser Arg Arg Leu Leu Glu Arg Val Asn Met
 35 40 45
 Cys Arg Ile Gln Arg Ala Asp Gly Asp Cys Asp Leu Ala Ala Val Ile
 50 55 60
 Leu His Val Lys Arg Xaa Arg Ile Cys Val Ser Pro His Asn His Thr
 65 70 75 80
 Val Lys Gln Trp Met Lys Val Gln Ala Ala Xaa Lys Asn Gly Lys Gly
 85 90 95
 Asn Val Cys His Arg Lys Lys His His Gly Lys Arg Asn Ser Asn Arg
 100 105 110
 Ala His Gln Gly Lys His Glu Thr Tyr Gly His Lys Thr Pro Tyr
 115 120 125

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 20 25 30
 Gly Asp Cys Asp Leu Ala Ala Val Ile Leu His Val Lys Arg Xaa Arg
 35 40 45
 Ile Cys Val Ser Pro His Asn His Thr Val Lys Gln Trp Met Lys Val
 50 55 60
 Gln Ala Ala Xaa Lys Asn Gly Lys Gly Asn Val Cys His Arg Lys Lys

65					70					75					80
His	His	Gly	Lys	Arg	Asn	Ser	Asn	Arg	Ala	His	Gln	Gly	Lys	His	Glu
				85					90					95	

Thr Tyr Gly His Lys Thr Pro Tyr
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<212> PRT
<213> Homo sapiens

<400> 3

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Met Cys

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<212> PRT
<213> Homo sapiens

<400> 4

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<212> PRT
<213> Homo sapiens

<400> 5

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Thr Pro Tyr

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<211> 3117
<212> DNA
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<220>

<221> unsure
 <222> (1)..(3117)
 <223> n at any position in the sequence may represent a or g or c or t/

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 tcatgtcaag cgcngaagaa tctgtgtcag cccgcacaac catactgtta agcagtggat 300
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 tggcaagagg aacagtaaca gggcacatca ggggaaacac gaaacatacg gccataaaac 420
 tccttattag agaatctaca gataaatcta cagagacaat cccccaagtg gacttggcca 480
 tgattggttg taagtttatc atctgaattc tccttattgt agacaacaga aaaaaacaaa 540
 atattggttt ttaaaaaatg aacaattgtg ccgtatgcaa atgtacccaa taatatactc 600
 cactggaaaa tgaaatgaaa aaannatact ggctgggtat ggtgggtccc cccttttatc 660
 ccannnnctt cgggaggcag aggcaggagg atcacttgag accaggantt ngagacnagc 720
 tgggggcaaa anagcaanga cntcatttnt acaaacnaaa aaaaannttg gcccgcntg 780
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 aaataataat aataatgata gtgtatatct tcatataata ttttaagnag gagcatatag 960
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 atgggtacaat gaacatctat atatctttca ccacaatatt aatcattggt aatattgtgc 1080
 cacatttgct ttctctctcc tctcttggtg ggggttncaa tataaaatat tataactttt 1140
 aaaatatatc ttgttttgct aaccattgga aaataagttg caaaaatcat gacacttcac 1200
 ccctagtttc ttttnggtgt tataacttga cataccctaa aataaagaca tttttctaca 1260
 taatcacctt atcagtttta tacctaaaaa attaataatt tcatctaata tattccatat 1320

tcaaattttc ccaactatth agagagcatt ttatgtagtt tttttttcac tccagtaatc	1380
aatcaaggtn gacatacata ttgcaaataa ttgttattht tctttaatat ctttcaatct	1440
aagaaagttc ctctgtctth tttttttaat ttttaaaatt atthttgttg gggaggggtct	1500
tgctgtgtct tccaggctgg agtgacgtgg cacaatttht atthttggctc actgaagcct	1560
caactthtagg gctcaagcaa tctctcccacc tcagcctncc cgagtatctg ggatcaagg	1620
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ttcaaaacgt ctagthtgag tagctaccgt tgthttggatt gaaattthct gatactgaaa	1980
agaacaaaaa gcctgcctth ctgcccanaa csnttgcyt ccccagtna gttcttgng	2040
cagnactagt tagggnccca gagttnggcc ttngkggtg tgattthang ytctgcctaa	2100
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caatytnngy tncattgcaa cytcngcytc cssgccgttc aaktgatyyt cttgcytcag	2280
cytccccaag taantgatat tacaggngcc cagccaccam acccngntga wthttgtatt	2340
thtartarar amrgggtthth cccgcnttg cngggctggt ctznaantcc ttgamctcna	2400
ktgaaccacc cgcctgtgcc ycccaaantg ctggaattac cancgthgan ccaccatgcc	2460
gggcycacac gthtgartth ganaccattg tnccattcct cthttggcct ythththntc	2520
catagnngct tcaagataga tangtaagrg cccagtagtn gthcwtarga agcnmatagr	2580
rancrggar cththtnatc aggtgggcag gtgtccnng cytccctgct ggytnntccc	2640
aagcgggtgt gthtgccarga nktnttggar gtgataatgg gananaccag naggcmctga	2700
gtyncnntag gthnaaatgc caccaaaact ggcctthggc ctaatatccy ycnttgamta	2760
nttarcatth awthttattwa ththnctgac atthntgcma nccthtgtht ththattthc	2820

nctntatara wgargaaatt tgaggntytt araggtaaaa tganttgenc nrgtnnacmc	2880
aggaagtggc nraranaanc tttttanatn mgaaaaaatt aataaaatat aatatgagag	2940
taacttaaaa tattaataaa ccacaatttt aaattaatta accgtgataa ccaacattaa	3000
taaaagttaa gataccaaaa cactgggtgn taattttttt aactaacaan ttgaattatt	3060
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gaagccatac ttcccattgc ctccagctgt tgcacggagg tttcacatca tatttccaga	120
aggctcctgg aaagagtgaa tatgtgtcgc atccagagag ctgatgggga ttgtgacttg	180
gctgctgtca tccttcatgt caagcgcnga agaatctgtg tcagccccgca caaccatact	240
gttaagcagt ggatgaaagt gcaagctgcc aanaaaaatg gtaaaggaaa tgtttgccac	300
aggaagaaac accatggcaa gaggaacagt aacagggcac atcaggggaa acacgaaaca	360
tacggccata aaactcctta t	381

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 <212> DNA
 <213> Homo sapiens

<400> 8

acacgaattc acgtaggaaa ttcttaacca aaaacattaa acctgaattt gatcacaaga	60
aaataattag gccaggcact gtggctcaca cctataatcc cagt	104

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 <211> 25
 <212> DNA
 <213> Homo sapiens

<400> 9	
gaattcacgt aggaaattct taacc	25

<210> 10
 <211> 22
 <212> DNA
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aetgggatta taggtgtgag cc	22

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<220>
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tccactgctt aacagtatgg ttgtgcgggc tgacacagat tnttctgcgc ttgacatgaa	180
ggatgacagc agccaagtca caatccccat cagctctctg gatgcgacac atattcactc	240
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gaagtatggc t 311

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<212> DNA
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<223> pCR3.1 Reverse Primer

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tagaaggcac agtcgagg 18

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<400> 14
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<210> 15
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<212> DNA
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<400> 15
caaattcagg tttaatgttt ttgg 24

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ctcaaacgtg tgagcccggc a

21

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<220>
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25

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<220>
<223> primers F8

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<211> 24
<212> DNA
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<223> Primer R5

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24

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<213> Homo sapiens

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Trp Ala Pro Ala Val His Thr Gln Gly Val Phe Glu Asp Cys Cys Leu
20 25 30
Ala Tyr His Tyr Pro Ile Gly Trp Ala Val Leu Arg Arg Ala Trp Thr
35 40 45
Tyr Arg Ile Gln Glu Val Ser Gly Ser Cys Asn Leu Pro Ala Ala Ile
50 55 60
Phe Tyr Leu Pro Lys Arg His Arg Lys Val Cys Gly Asn Pro Lys Ser
65 70 75 80
Arg Glu Val Gln Arg Ala Met Lys Leu Leu Asp Ala Arg Asn Lys Val
85 90 95
Phe Ala Lys Leu His His Asn Met Gln Thr Phe Gln Ala Gly Pro His
100 105 110
Ala Val Lys Lys Leu Ser Ser Gly Asn Ser Lys Leu Ser Ser Ser Lys
115 120 125
Phe Ser Asn Pro Ile Ser Ser Ser Lys Arg Asn Val Ser Leu Leu Ile
130 135 140
Ser Ala Asn Ser Gly Leu
145 150

<210> 21
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<213> Homo sapiens

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Met Cys Cys Thr Lys Ser Leu Leu Leu Ala Ala Leu Met Ser Val Leu
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Leu Leu His Leu Cys Gly Glu Ser Glu Ala Ser Asn Phe Asp Cys Cys
20 25 30
Leu Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe Ile Val Gly Phe
35 40 45

Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile Phe
50 55 60

His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr Trp
65 70 75 80

Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met
85 90 95

<210> 22

<211> 94

<212> PRT

<213> Homo sapiens

<400> 22

Met Ala Pro Leu Lys Met Leu Ala Leu Val Thr Leu Leu Leu Gly Ala
1 5 10 15

Ser Leu Gln His Ile His Ala Ala Arg Gly Thr Asn Val Gly Arg Glu
20 25 30

Cys Cys Leu Glu Tyr Phe Lys Gly Ala Ile Pro Leu Arg Lys Leu Lys
35 40 45

Thr Trp Tyr Gln Thr Ser Glu Asp Cys Ser Arg Asp Ala Ile Val Phe
50 55 60

Val Thr Val Gln Gly Arg Ala Ile Cys Ser Asp Pro Asn Asn Gln Arg
65 70 75 80

Val Lys Asn Ala Val Lys Tyr Leu Gln Ser Leu Glu Arg Ser
85 90

<210> 23

<211> 96

<212> PRT

<213> Homo sapiens

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Trp Pro Glu Asp Val Asp Ser Lys Ser Met Gln Val Pro Phe Ser Arg
20 25 30

Cys Cys Phe Ser Phe Ala Glu Gln Glu Ile Pro Leu Arg Ala Ile Leu
35 40 45

Cys Tyr Arg Asn Thr Ser Ser Ile Cys Ser Asn Glu Gly Leu Ile Phe
50 55 60

Lys Leu Lys Arg Gly Lys Glu Ala Cys Ala Leu Asp Thr Val Gly Trp
65 70 75 80

Val Gln Arg His Arg Lys Met Leu Arg His Cys Pro Ser Lys Arg Lys
85 90 95

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<212> PRT

<213> Homo sapiens

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Ala Gln Pro Asp Ser Val Ser Ile Pro Ile Thr Cys Cys Phe Asn Val
1 5 10 15

Ile Asn Arg Lys Ile Pro Ile Gln Arg Leu Glu Ser Tyr Thr Arg Ile
20 25 30

Thr Asn Ile Gln Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Lys Arg
35 40 45

Gly Lys Glu Val Cys Ala Asp Pro Lys Glu Arg Trp Val Arg Asp Ser
50 55 60

Met Lys His Leu Asp Gln Ile Phe Gln Asn Leu Lys Pro
65 70 75

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<211> 98

<212> PRT

<213> Homo sapiens

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Met Lys Val Ser Ala Val Leu Leu Cys Leu Leu Leu Met Thr Ala Ala
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20 25 30

Thr Cys Cys Phe Thr Phe Ser Ser Lys Lys Ile Ser Leu Gln Arg Leu
35 40 45

Lys Ser Tyr Val Ile Thr Thr Ser Arg Cys Pro Gln Lys Ala Val Ile
50 55 60

Phe Arg Thr Lys Leu Gly Lys Glu Ile Cys Ala Asp Pro Lys Glu Lys
65 70 75 80

Trp Val Gln Asn Tyr Met Lys His Leu Gly Arg Lys Ala His Thr Leu
85 90 95

Lys Thr

<210> 26
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<213> Homo sapiens

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20 25 30

Cys Phe Asn Leu Ala Asn Arg Lys Ile Pro Leu Gln Arg Leu Glu Ser
35 40 45

Tyr Arg Arg Ile Thr Ser Gly Lys Cys Pro Gln Lys Ala Val Ile Phe
50 55 60

Lys Thr Lys Leu Ala Lys Asp Ile Cys Ala Asp Pro Lys Lys Lys Trp
65 70 75 80

Val Gln Asp Ser Met Lys Tyr Leu Asp Gln Lys Ser Pro Thr Pro Lys
85 90 95

Pro

<210> 27
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<213> Homo sapiens

<400> 27

Met Lys Ala Ser Ala Ala Leu Leu Cys Leu Leu Leu Thr Ala Ala Ala
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20 25 30

Thr Cys Cys Tyr Arg Phe Ile Asn Lys Lys Ile Pro Lys Gln Arg Leu
35 40 45

Glu Ser Tyr Arg Arg Thr Thr Ser Ser His Cys Pro Arg Glu Ala Val
50 55 60

Ile Phe Lys Thr Lys Leu Asp Lys Glu Asp Cys Ala Asp Pro Thr Gln
65 70 75 80

Lys Trp Val Gln Asp Pro Met Lys His Leu Asp Lys Lys Thr Gln Thr
85 90 95

Pro Lys Leu

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<212> PRT

<213> Homo sapiens

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Met Lys Val Ser Ala Ala Leu Leu Cys Leu Leu Thr Ala Ala Ala
1 5 10 15

Phe Ile Pro Gln Gly Leu Ala Gln Pro Asp Ala Ile Asn Ala Pro Val
20 25 30

Thr Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu
35 40 45

Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val
50 55 60

Ile Phe Lys Thr Ile Val Ala Lys Glu Asp Cys Ala Asp Pro Lys Gln
65 70 75 80

Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr
85 90 95

Pro Lys Thr

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<212> PRT

<213> Homo sapiens

<400> 29

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Leu	Cys	Ala	Pro	Ala	Ser	Ala	Ser	Pro	Tyr	Ser	Ser	Asp	Thr	Thr	Pro
			20					25					30		
Cys	Cys	Phe	Ala	Tyr	Ile	Ala	Arg	Pro	Leu	Pro	Arg	Ala	His	Ile	Lys
		35					40					45			
Glu	Tyr	Phe	Tyr	Thr	Ser	Gly	Lys	Cys	Ser	Asn	Pro	Ala	Val	Val	Phe
	50					55					60				
Val	Thr	Arg	Lys	Asn	Arg	Gln	Val	Cys	Ala	Asn	Pro	Glu	Lys	Lys	Trp
65					70					75					80
Val	Arg	Glu	Tyr	Ile	Asn	Ser	Leu	Glu	Met	Ser					
				85					90						

<210> 30
 <211> 93
 <212> PRT
 <213> Homo sapiens

<400> 30

Met	Lys	Ile	Ser	Val	Ala	Ala	Ile	Pro	Phe	Phe	Leu	Leu	Ile	Thr	Ile
1				5					10					15	
Ala	Leu	Gly	Thr	Lys	Thr	Glu	Ser	Ser	Ser	Arg	Gly	Pro	Tyr	His	Pro
			20					25					30		
Ser	Glu	Cys	Cys	Phe	Thr	Tyr	Thr	Thr	Tyr	Lys	Ile	Pro	Arg	Gln	Arg
		35					40					45			
Ile	Met	Asp	Tyr	Tyr	Glu	Thr	Asn	Ser	Gln	Cys	Ser	Lys	Pro	Gly	Ile
	50					55					60				
Val	Phe	Ile	Thr	Lys	Arg	Gly	His	Ser	Val	Cys	Thr	Asn	Pro	Ser	Asp
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Lys	Trp	Val	Gln	Asp	Tyr	Ile	Lys	Asp	Met	Lys	Glu	Asn			
				85					90						

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 <212> PRT
 <213> Homo sapiens

<400> 31

Met	Lys	Leu	Cys	Val	Thr	Val	Leu	Ser	Leu	Leu	Met	Leu	Val	Ala	Ala
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Phe	Cys	Ser	Pro	Ala	Leu	Ser	Ala	Pro	Met	Gly	Ser	Asp	Pro	Pro	Thr
			20					25					30		
Ala	Cys	Cys	Phe	Ser	Tyr	Thr	Ala	Arg	Lys	Leu	Pro	Arg	Asn	Phe	Val
		35					40					45			
Val	Asp	Tyr	Tyr	Glu	Thr	Ser	Ser	Leu	Cys	Ser	Gln	Pro	Ala	Val	Val
	50					55					60				
Phe	Gln	Thr	Lys	Arg	Ser	Lys	Gln	Val	Cys	Ala	Asp	Pro	Ser	Glu	Ser
65					70					75					80
Trp	Val	Gln	Glu	Tyr	Val	Tyr	Asp	Leu	Glu	Leu	Asn				
				85					90						

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 <213> Homo sapiens

<400> 32

Met	Gln	Val	Ser	Thr	Ala	Ala	Leu	Ala	Val	Leu	Leu	Cys	Thr	Met	Ala
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Leu	Cys	Asn	Gln	Val	Leu	Ser	Ala	Pro	Leu	Ala	Ala	Asp	Thr	Pro	Thr
			20					25					30		
Ala	Cys	Cys	Phe	Ser	Tyr	Thr	Ser	Arg	Gln	Ile	Pro	Gln	Asn	Phe	Ile
		35					40					45			
Ala	Asp	Tyr	Phe	Glu	Thr	Ser	Ser	Gln	Cys	Ser	Lys	Pro	Ser	Val	Ile
	50					55					60				
Phe	Leu	Thr	Lys	Arg	Gly	Arg	Gln	Val	Cys	Ala	Asp	Pro	Ser	Glu	Glu
65					70					75					80
Trp	Val	Gln	Lys	Tyr	Val	Ser	Asp	Leu	Glu	Leu	Ser	Ala			
				85					90						

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<400> 33

Met Gln Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala
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Leu Cys Asn Gln Phe Ser Ala Ser Leu Ala Ala Asp Thr Pro Thr Ala
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Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile Pro Gln Asn Phe Ile Ala
35 40 45

Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser Lys Pro Gly Val Ile Phe
50 55 60

Leu Thr Lys Arg Ser Arg Gln Val Cys Ala Asp Pro Ser Glu Glu Trp
65 70 75 80

Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala
85 90

<210> 34

<211> 89

<212> PRT

<213> Homo sapiens

<400> 34

Met Lys Gly Leu Ala Ala Ala Leu Leu Val Leu Val Cys Thr Met Ala
1 5 10 15

Leu Cys Ser Cys Ala Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu
20 25 30

Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser
35 40 45

Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys
50 55 60

Arg Gly Arg Gln Asp Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys
65 70 75 80

Tyr Ile Ser Asp Leu Lys Leu Asn Ala
85

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104

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